

221 Despite the availability of fish and of vegetables in
the canal, the highest cash outlays for family food occurred
in this transplanting season. Several factors probably con-
tributed to this: increased food energy needs because of
long hours of work, vendors again accessible because of high
water, cash from sale of last year's crop still in hand, the
convenience of cooked foods and snacks, and perhaps the need
to replenish household supplies after the long drought, or
after their depletion by a ceremony.

221 The two months of September and October during which
the rice grew afforded some respite. People slept a little
longer and breakfast was not prepared so early. The skilled
cook might take over and could give more attention to food
preparation. All who could, took the opportunity to visit
and take trips. A few might go on a pilgrimage. Therefore,
in this season, all family members were less often together
at the evening meal. Fishing was a continuous occupation,
with some preserving and home craft. Jobs such as selling
food in the market were undertaken for ready cash; houses and
equipment were built or repaired. Finally the threshing
floor was prepared.

221 High water caused time-consuming inconvenience only in
earth-floored cottages where it was necessary to keep the
rice stores and chickens dry, move the cook-stove, and either
build plank walks or cook standing ankle deep in water.

221 By November, the earliest varieties of rice matured.
Those who owned several rice fields could put at least one
into an early type. Many persons, by then short of rice,
were glad to be thus tided over. One grandmother divided her
first harvest among her several long-since-independent
married children; 2 tangs¹ of milled rice per family, 40 for
herself.

221 The heroic labor of harvest occupied December, January,
and February. Farmers raced against the all-too-fast lower-
ing of the water in the canals, without which sheaves could
not be moved and buyers could not come for the paddy. People
worked all daylight hours in the fields, threshed far into
the night. At this time also many varieties of fish matured
and men fished night after night. Just when the convenience
of purchased food was greatest, cash was exhausted. With
rice money in sight, vendors might be generous with credit,
but they could navigate only the larger canals, so were not
available to many.

000 There was an important psychological difference between

[Footnote] 1. One tang equals 20 liters. Milled rice weighs
about 16 kg. per tang.

311
361 rice land. Water-ways, however, were public areas, and any
[365] convenient wide spot might be selected as a private garden.
It was marked with stakes, and was apparently not disturbed
by others.

262 Mushroom culture as a side line activity of rice far-
344 mers developed during the period when this study was in
435 progress. After threshing, in early 1954, two of eleven
families that participated in the dietary study started rais-
ing mushrooms. Although most of these were sold, both fami-
lies reported frequent inclusion of mushrooms in the family
diet. One informant commented that families that planted
mushrooms also ate them almost every day, and said "Adults
complain that it is a wearisome food but children still like
it." Mushrooms were used fried, with pork, in soup or in
curry.

[349] As with tilapia, mushroom culture appears to have been
undertaken primarily to increase cash income, and was aban-
doned when it was no longer profitable financially (see
Appendix A, pp. 101-102).

Food Purchased and Cash Expenditures for Food

262 Relatively few foods were purchased, but some of these,
432 such as onion, garlic, lines, tamarind, coconut and palm
sugar were so frequently used that without cash to buy them,
villagers would have considered their diet monotonous. Many
had their own supply of fresh and dried chilies, fishsauce, and
shrimp paste, which might, however, be inadequate for their
needs. Other foods not commonly produced in Bang Chan were
purchased for variety.

262 Estimates of mean annual consumption and cost of pur-
432 chased foods, for 106 households in Bang Chan are shown in
124 Table 1.

262 The list of purchased foods presented by Janlekha (1955)
432 was compiled after preliminary interviews with a number of
household heads. It includes the principal food items which
were commonly purchased in Bang Chan. In addition to these,
the affluent household studied by Sharp et al. (1953) spent
appreciable amounts for vegetables (listed as cucumbers,
lettuce, cabbage, etc.) and fruit (pineapple, mangoes, melons,
etc.) and small amounts for peanuts, soy sauce and vinegar
sauce. Eggplant and white radish were bought by more than
half the families that participated in the dietary study, and
were used on 11 and 8 survey days respectively. Other vege-
tables and fruits, bought by one or two of the 11 families,
and used on not more than 3 of the 44 survey days were: mung
beans, snap beans, bean sprouts, Chinese celery, cucumber,
leeks, lettuce, mushrooms, sugar cane, sweet potato, taro,
turmeric, (2)ma-(1)fa; or ramai, Thai nutmeg, orange, pine-
apple, rambutan, sandorica and watermelon. Salted and
pickled white radish and pickled bamboo shoots were the only

[Text continues on page 23:-- Analyst]

Table 1. Mean Annual Consumption and Cost of Purchased Foods,
for 106 Households¹ in Bang Chan, 1953
(Adapted from Janlekha, 1955, p. 316)

<u>Foods purchased</u>	<u>Estimated Amount</u>	<u>Estimated Cost baht²</u>
Raw fish	16.6 kg.	83
Fish sauce (fishsoy)	36 bottles	54
Shrimp paste	6 kg.	27
Pork and beef	8.4 kg.	84
Vegetables	1 kg.	1
Onion ³	11.3 kg.	34
Garlic ³	11.3 kg.	34
Coconut ⁴	196 fruit	292
Chilies, dried	7.6 kg.	53
Limes ⁴	80 fruit	16
Tamarind ⁴	6.3 kg.	19
Palm sugar ³	71.4 kg.	152
White sugar	4 kg.	16
Total		865
Average cost per day		2.53
Average cash expenditure per person per day for food		0.44

1. Average size, 5.7 persons.

2. At the time of the study, one baht equaled about 5 cents.

3. Not produced in Bang Chan (Sharp et al., 1953, pp. 295 and 299).

4. Little production in Bang Chan.

262 preserved vegetables which were purchased and used frequently
432 by families participating in the dietary study.

262 The food costs reported by Janlekha (1955) were esti-
435 mates recorded from memory at relatively frequent intervals.
The average per capita cost, 0.44 baht per day, was similar
to the average cash expenditure of 0.47 baht per person among
11 families participating in the dietary study (based on the
average of 4 survey days for each family). Thus, in Bang
Chan, cash expenditure for food appeared to be relatively
small, i.e. farm families produced a large share of all food
consumed. If money were not available to buy, they would
still have enough to eat, but it might lack variety. One in-
formant said, for instance, that he usually bought a coconut
every other day, but during October, when cash was short, he
bought none. Janlekha (1955) considered the estimates ob-
tained for expenditures for fruits and vegetables less re-
liable than for items purchased more regularly.

262 In Table 2, the percentage distribution of food
511

Table 2. Division of Food Expenditures by Food Groups, for
Eleven Families that Participated in the
Dietary Study, 1953-54

	A 6 families ¹ %	B 5 families ¹ %
Animal foods	30.8	39.3
Fruits ²	30.3	26.3
Vegetables ³	28.7	17.0
Fats and Oils	3.3	8.4
Sugar	3.6	3.5
Pulses, nuts	-- ⁴	0.9
Spices, etc.	2.7	-- ⁴
Miscellaneous	0.7	4.5

1. Based on 4 days per family.

2. Primarily coconut.

3. Chiefly non-leafy

4. The dash indicates no purchase or a value of less
than 0.1%.

Table 5. Diet Classifications for 75 School Children in
Bang Chan, and Percentage of Children with
Each Diet Classification who Missed Lunch

(Adapted from Thorangkul, 1957)

Diet classification ¹	Percentage of children	Percentage of children who missed lunch	
Class I	8	Boys	46
		Girls	45
Class II	61	Boys	73
		Girls	68
Class III	31	Boys	81
		Girls	98

1. See text for basis of classification.

vegetables eaten, since items from these two food groups were not commonly eaten as snacks. Note, in the illustrative records presented in translation (Appendix A, p. 98), that the child whose diet was considered to be in Class III did not eat a regular lunch on any of the six days for which records were available, whereas the child whose diet was classified as I ate a regular lunch six times out of seven.

Family Food Shared With Others

Throughout the year families prepared especially good meals for persons who came to work cooperatively with them. Every rice-grower entertained his cooperative harvest crew, some the transplanters. Hired laborers were not usually served such feasts, but the conviviality of the harvest season called for a round of liquor even for them. One harvest dinner for 48 cost 50 baht, plus eels (60 baht) and rice. Cooperative home pounding of rice was still practiced in some households and thought to be fun. In one day enough rice to produce 40 tang (640 kg.) was pounded by groups of 15 to 20 workers; in an evening 20 tang were done. If 40 tang were milled, workers were served a full meal; if 20 tang, a dessert only. Other occasions were fish-pond draining, house raising and repair. Each participant in the fish-pond draining at Household 21 was fed (3)khaav (3)tom (soupy rice) for lunch and "an enormous supper," in addition to receiving the traditional pot of fish. If good food were not served at these functions people

50

In Bang Chan when donations for a new school

264 building warranted buying the foundation materials, so that
476 volunteer labor was solicited for their installation, some of
346 the money went into food, despite additional donations of
food. This was in no way misappropriation. Helping to cook
was as important as helping to dig the holes.

782 The spirit-offering, or the portions eaten by a partic-
264 ipant as a sacrament, were actually tiny bits of each food.
Afterward, the entire lay-out, pork, sweetmeats and all, was
eaten. Because all this was holy food, it was felt to be
especially strengthening, so was usually given to children,
but might be eaten by family members and occasionally, priests.
262 The pork was cut up and eaten with a hot sauce, or put into a
252 "with-rice" dish. It was especially appropriate with liquor.

262 The use of food ritually was not limited to the ceremon-
755 ial season nor to big events. The same purposes underlay the
852 use of a hard-boiled egg eaten in the ceremony that was de-
signed to restore a child "sick from temporary loss of its
soul," and in another performed in order to wean a baby.

43 The benefits of a (1)ngaan accrued to every participant
554 down to the last worker and contributor according to the degree
796 of assistance. With status in this and in later lives at
stake, no one hesitated to plunge into debt or even to sell
land. For the sake of economy two different ceremonies might
be performed on the same day, for example a child's topnot
cutting at a daughter's wedding.¹ The saving was in time and
expense for food preparation, but such multiple ceremonies
were performed less often than one might expect.

796 One assistance in the financing was that every invited
476 guest made a contribution, customarily 5 to 10 baht, which
435 helped defray the costs. In 1952, household heads reported
these contributions as totalling from 30 to 1,000 baht, with
an average of 343 for the year (Janlekha, 1955). Of 96 house-
hold heads who provided information on special expenses during
the 5-year period March, 1948 through February, 1953, 36 had
given (1)ngaan with net expenditures (costs minus contribu-
tions) ranging from -10² to 15,000 baht. The average net cost
was 4,361 baht (Janlekha, 1955). These figures might repre-
sent a single (1)ngaan or several events.

1. Every desired ritual could be carried out at little
cost. Thus a priest-candidate whose father was dead, was in-
cluded in the pre-ordination festivities planned for a friend;
and on one occasion five bodies were cremated at the same
ceremony, which was sponsored by the kin of one of the deceased.

2. The -10 meant that contributions exceeded the cost.

- 435 Some information as to the cost in baht of the larger
196 ceremonies held in 1954, and their scale, was obtained from
[124] the school teacher's diary. Examples follow:

[792] Ordination: Total cost 8,000, including food 1400,
liquor 800. Guests contributed 4000.

[852] Top-knot tonsure: Total cost 1550, including new
utensils 550; 6 priests fed; each priest
given 12 baht; 12 (2) pin-(1)toos filled to
take to the temple; 100 duck eggs donated,
and 300 baht received from 30-40 guests.

[714] Cremation¹: Total cost 40,000², including about 10,000
for food; 61 priests fed³. About 500
guests contributed 4377.

[875] Homage-to-the-teacher ritual:
A: Total cost 715, including food 565 and
liquor 150; 40 tang (800 liters) fish and
3 tang Chinese noodles donated.
B: Total cost, 11,000⁴.

[585] Wedding: A: Thai Buddhist: Total cost 5000.
Guests gave 2300.

[583] B: Rite of forgiveness after elopement:
a meal, with 5 bottles of liquor.

[184] C: Moslem: 2 buffalo slaughtered.
400 guests.

585 Arranged marriages could be large merit-making affairs,
262 with a huge procession from one house to the other of twenty-
four "pairs" of specified foods, i.e. two bearers each of
sugar cane, fruits, sweetmeats and other things. At more
[583] modest weddings and the rite of forgiveness for a couple who
had eloped, food might differ from the usual fare only by in-
cluding the three essentials of a wedding: pork, chicken and
alcohol.

273 Increased consumption of alcoholic beverages during the
196 ceremonial season was indicated by the sales of one local
443

1. Cremation was the last of several rites at death.
Private 7-day, 30-day and 100-day rites were held, when
priests came to the home to chant and to be feasted.

2. With cooperative assistance from well-situated
relatives in Bangkok.

3. The whole chapter of priests from Wat Bang Chan
[792] was always included at cremations, and often others from a
[574] distance.

4. See list of food purchased, Appendix A, pp. 102-103.

Table 8. Summary of Economic Conditions of the Two Groups of Households Participating in Dietary Studies

Household		Land		Buf- falo ¹	Food Cost ²		No. of Priests Fed	Sources of Income
Group and Code No.	Mem- bers	Rai Worked	Rai Owned		Total	Per Cap.		
Group A								
222	5	0	0	0	2.96	0.59	0	Labor contractor; hired out as labor; boat repair; fishing; vegetables sold; canal digging.
12	3	12	0	1	2.70	0.90	0	Rice production; occasional work in Bangkok.
215	5	14	0	1	1.59	0.32	0	Rice production; wife, a medium.
67	5	16	6	1-0	2.52	0.50	0	Rice production; eggs sold; road jobs.
2	63	20	0	2	3.97	0.66	3	Rice production; "professional cook".
103	8	47	12	5	2.04	0.26	2 ⁴	Rice production; eggs, fish, mushrooms sold; buffaloes raised.
Mean		10.2	3.0	1.6	2.37	0.49	0.7	
Group B								
23	83	6	0	1	1.56	0.19	0	Rice production; selling fish and vegetables; masseur.
21	4	25	25	3	1.92	0.48	3	Rice production; headman
16	8	47	47	5	2.70	0.34	2	Rice production; vegetables, fruit sold; road jobs.
25	8	50	50	3	7.97	1.00	2	Rice production; eggs, mushrooms sold.
20	9	66	51	11	2.47	0.27	2	Rice production; ceremonialist; doctor; carpentry; trading; eggs collected and sold.
Mean		33.8	34.7	2.6 ¹	3.32	0.45	1.8	

1. The buffalo belonging to Household 67 died during the year. In Household 20, the brother who moved in owned several buffalo, thus the total for Group B was more than the number shown.

2. Average cash expenditure per day, in baht. (One baht equalled about 5 cents) Household 222 received rice as part of wages.

3. Babies born during Round IV were not included. In Household 23, a 12-year old son served as temple boy and was away from home much of the time.

4. Rainy season only, when priests could come by boat; counted as 1 in computing average.

125 fishing and selling vegetables, they managed to obtain a fair
532 diet. The father's skill as a masseur was valued especially
511 at periods of heavy farm work, after childbirth, and by the
434 cooks at a ceremonial feast. This brought in from 2 to 12
463 baht per week.

[262]

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and
[235] housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household
[57] 67 were shy. One or the other of the two older children
[59] often stayed home from school to look after the baby, so
[124] that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household
[152] 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the
[465] activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3 1/2 rai of land, as well as cash. Maintenance of a son in school in
[335] Bangkok cost about 1000 baht per year plus 60 tang of rice.
[371] In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

431 All families in the survey group were Thai Buddhists,
262 and 6 of them offered food to priests more or less regularly.
732 On 17 of the 24 survey days when the observer visited these
[173] households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

511 Cash Expenditures for Food. - Mean total, and per
[120] capita daily cash expenditures for food for survey days, are shown, by household in Table 3. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janickha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

146 For items used less frequently, the figures are correspond-
262 ingly less than the usual amount eaten. Thus, sweet potato,
which is represented as 18 grams per day per person in Group
A, actually appeared on 3 records only. One family of 6 per-
sons ate 1200 grams of sweet potato at one meal and a sub-
stantial amount later the same day. Most items appear on the
lists for both groups, but sweet potato, sweet basil and
bananas were included on the list for Group A only, and glu-
tinous rice which is used as a sweet in this area, appears on
the list for Group B only. Note that a few common foods
account for most of the nutrients in the diets of both groups.
These common foods account for only about 80% of the calcium
and vitamin A value and slightly less of the ascorbic acid in
the diets of Group A. The list for Group B accounts for
about 70% of the calcium and 60% of the ascorbic acid in the
diets of this group. The variety of green leaves used once
or twice only on survey days by Group B, and the number of
different seasonal fruits used by both groups in small amounts
as snacks, probably account for this.

264 Contribution of Snacks to the Nutrient Content of Diets. -

[259] On the average, 4 out of 5 children had one snack per day,
262 whereas only one adult in 6 did so. The following items
appeared most commonly: various kinds of fruit, 40 times
(orange 7, banana 6, pineapple, watermelon and mango each 5
times, guava, jujube and Manila tamarind each 2 times, olives,
rambutan, rambai, star gooseberry, (2)ta-(1)koo and Thai nut-
meg each once,) coconut and bread each 13 times, glutinous rice
8, mung bean 7, truffles 6, products made of rice flour 6
times, and a variety of other items including rice noodles,
sweet potato, taro, bean sprouts, lotus stalks, lotus seeds,
popcorn, products made of cassava flour, sugar cane, pork and
milk from 1 to 4 times each. Salt, and/or palm sugar were
[246] eaten with a number of the snacks. Although they contributed
only about 2% of the total calories, and from 1 to 3% of most
nutrients, snacks contributed 16% of the total ascorbic acid
for Group A and 11% for Group B.

Seasonal Variation in Food Preparation, Meal Patterns, Food
Costs and Calorie and Nutrient Value of Foods Taken

128 In Table 14, a summary including the number of meals
258 prepared, time spent in meal preparation, number of "with-
264 rice" dishes, and cash expenditures for food is given by
• [238] rounds, for families in each group.

252 Number of Meals Prepared. - Food was cooked twice on
512 each survey day in 3 of 6 households in Group A and 3 of 5
households in Group B. Heavy farm work or vending which kept
the mother away from the house sometimes accounted for once-
a-day food preparation. One housewife who took food to market
[443] in Bangkok, cooked food twice a day only during the period
shortly before the birth of a child, when she was not vending.

[Text continues on page 78 - Analysis]

Table 14. Summary Concerning Meal Preparation, by Rounds¹ for Two Groups of Households Studied

Description of Items	Group A				Group B			
	Round I	Round II	Round III	Round IV	Round I	Round II	Round III	Round IV
No. of meals prepared - 2	5	4	4	4	4	4	5	3
- 1	1	2	2	2	1	1	0	2
Range of cooking time, hrs.	0.8-6.0 ²	1.0-2.6	1.3-2.7	1.3-4.0	1.7-3.2	1.4-4.1	2.2-3.3	1.0-3.2
Average cooking time, hrs.	3.7	2.0	1.8	2.4	2.5	3.1	2.8	2.0
Range of no. of dishes prepared	2-8	2-5	1-4	1-4	2-5	2-7	2-6	2-5
Average no. of dishes prepared ³	5	3	3	3	3	5	3	3
Range of no. of hot dishes	0-3	0-2	0-2	1-3	0-2	1-2	1-2	0-2
Average no. of hot dishes	1	1	1	2	1	2	1	1
Range of no. of mild dishes	2-7	0-3	0-3	0-3	1-3	1-5	1-4	1-3
Average no. of mild dishes	4	2	2	1	2	3	2	2
Range of cash expenditure for meals/day (bahts)	1.53-4.45	0.61-6.30	0.12-4.52	0.66-2.88	0.71-16.24	1.07-11.86	1.12-4.13	0.45-3.47
Average cash expenditure for meals/day (bahts)	3.01	2.96	2.39	1.70	4.85	4.11	2.61	1.36

1. For dates, see Table 7, p. 58.

2. If time waiting for a vendor was not counted, the range of cooking time would be 0.8-4.1 and the average would be 3.2 hours.

3. "With-rice" dishes only. Rice is always cooked whenever a Thai meal is prepared.

4. One baht was equal to 5 cents at the time of studies.

252 Another, who had time during Round IV to prepare food twice a
262 day, preferred to prepare more in the morning when she expected
264 to offer food to her son who had just been ordained. In two
512 instances an evening meal was not prepared because the father
512 and mother had been invited to a feast in connection with an
[525] ordination ceremony, on one occasion a mother did not prepare
food because she was gambling. In all of these cases, the
evening meal at home consisted of leftover rice and other
foods prepared earlier. The housewife in Household 215 some-
times received cooked foods from visitors in return for her
services as medium, and these were used, together with left-
over foods, for the evening meal. The meal patterns of the
two groups of families did not appear to differ greatly.

252 Time for Meal Preparation and Number of Dishes Pre-
pared. - In general, the time for meal preparation varied
with the number and type of "with-rice" dishes prepared. The
"hot" dishes usually required more preparation time than the
mild ones, because of the time required to pound spices, and
to cut up ingredients. Once-a-day food preparation reduced
the time required for cooking. More time was apt to be spent
on food preparation when the housewife was least busy with
farm work or other work outside the home. Some of the fami-
lies visited early in Round I had not begun heavy farm work,
and in some, children, who were less skilled, did the cooking.

262 Cost of Food Purchased. - The lowest cash expenditure
436 for food by any household on a survey day was 0.12 baht, for
311 a family in Group A, and the highest 16.24 bahts, for a house-
hold in Group B (Table 14, p. 78). On a per capita basis,
however, the mean cash expenditure for food by Group A house-
holds, for all survey days, was slightly higher than for
households in Group B (Table 8, p. 62), and no evidence was
obtained that in general households in one group tended to
spend more for food than households in the other. Despite
the wide variation in cash expenditures for food on the sur-
vey days, the tendency for cash expenditures for food to
decrease in both groups of households as the survey year pro-
gressed was apparent. Most of the rice was sold at the end
262 of Round III. The cash went for capital investments, not
436 food, during Round IV. With time to drain ponds and to fish
[271] intensively, and with ceremonies to attend, people did not
need to buy fish and meat which were relatively expensive.

164 Calorie and Nutrient Value of Foods Eaten. - The
221 seasonal variation in calorie and nutrient intake of the two
[221] groups of families is shown in Table 15. As one would expect,
the average calorie intake was higher during Rounds I and III,
when relatively heavy farm work associated with planting and
harvesting was under way, than during Round II, which was
primarily the growing season for rice, or Round IV, when the
harvest was in, and the earth was dry so that preparation for
the next planting had not yet begun. Greater consumption of
rice in Rounds I and III was largely responsible for the

[Text continues on page 81 - Analysis.]

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cent of the respondents report that they have engaged in this activity). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

243 At the height of the boom, the demand for rice straw swept many of the fields clean of the stubble usually left there after harvest, thereby decreasing food for the roaming buffalo and the small increment of nutrients usually plowed back into the soil.

The advantages of mushroom culture cited by Goldsen and Ralls (1957) were 1) the cash outlay required was small, 2) returns were realized quickly as the cycle was completed in two to three weeks, 3) little heavy work was required and 4) at the time when Ralls made the survey, a ready market was available. When, in 1957, the price dropped sharply, most of the growers gave up.

Food for Homage-to-the-Teacher Rite
Performed by a Buddhist Priest Who Was
a Traditional Practitioner

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435
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Item	Amount	Cost in Baht	Item	Amount	Cost in Baht
<u>Cereals and Legume Seeds:</u>			<u>Fish and Meat (cont.):</u>		
Rice noodles		10.	Dried fish	6	gift
Soybeans & fermented vegetables	25 kg.	12.	Roasted fish	3 kg.	gift
Mung beans	10 lit.	25.	Shrimp paste	2 kg.	18.
Cassava flour		3.25	Lobsters		15.
<u>Sugar and dessert:</u>			Lobsters (for soup)		7.50
Palm sugar	1 pail	67.	Pig's skin (for soup)		10.
Cane sugar	14 kg.	85.	Beef	15 kg.	150.
(2)kha-(5)nom	300 cups	35.	Ingredients for Mussel-man curry		27.
(3)tua-(1)foe			Boiled chickens	2	22.
<u>Fish and Meat:</u>			Pig's head	4 heads	222.
Fish (1)plaa		6.	Pork	4 kg.	40.
(2)nyk for soup					
Silurus and serpenthead	60 kg.	gift			

Food for Homage-to-the-Teacher Rite (cont.)						
	Item	Amount	Cost in Baht	Item	Amount	Cost in Baht
262 435 796 [95]	<u>Fruit:</u>			<u>Vegetables (leafy green & yellow) cont.:</u>		
	Bananas	5 bun.	from father	Lettuce		--3
	(3)klua;			Parsley		--3
	(4)nam-(4)waa)			Pumpkin	3 fruits	12.
	Chico ²		5.	Sweet basil	leaves	1.
	Cocunut	150	180.	Sweet potatoes	6 kg.	6.
	Cocunut	30	30.	(3)Tang-(5)oo		--3
	(young, to make dessert)			<u>Seasonings etc.:</u>		
	Job's tears	1 lit.	3.	Vinegar	1 bottle	1.
	Plums, yellow ²		5.	Fishsoy	1 jar	10.
	Pomelos ²		6.	(2)Ka-(1)chaaj	2½ kg.	12.50
	Rose apples ²		2.	Sodium		
	Tamarind		7.50	glutamate		5.
	Tomato sauce		8.	Pepper		14.
	Young palm fruit ⁴	7 bun.	3.	Agar	400 gms.	36.
[272] [273] [276] [54]	<u>Vegetables (non leafy):</u>			<u>Miscellaneous:</u>		
	Bamboo shoots, 1 pail cooked		28.	Cola beverage	72 bottles	72.
	[272]Cucumber		--3	Liquor	16 bottles	80.6
	[273]Egg plants		--3	Ice		30.6
	[276]Garlic	5 kg.	26.50	Cigarettes	2 pkgs.	--6
	Gourd, white		1.	Tobacco	1 heap	--6
	Onion, fragrant ⁵		6.	Betel pepper		9.
	Onion ⁵	4 kg.	4.	Fresh areca nut		10.
	Onion, welsh ⁵		--3	Dried areca nut		8.
	Mushrooms		3.	Dried palm	1 big leaves bundle	2.
	Radish, white		--3	Firewood		50.
	<u>Vegetables (leafy green and yellow):</u>			Total		
	Cabbages		--3			1577.75
	Chinese kale		--3			
	Chili, green		7.50			

- [189]
- For Moslem guests.
 - Food items placed on a tray and used in the ceremony proper.
 - Items so marked cost a total of 140 baht.
 - Not identified.
 - Several kinds of onions, both fresh and dried, are commonly used.
 - Prices not stated; estimate for liquor.

Food Preparation and Consumption

Sept. 25, 1953

Household No. 21

Menu 1	Raw Ingredients				Ined. Inf. 5	E.P. 6	Cooked Foods		
	Kind 2	Wt. A.P. 3	Cost 4				Dish 7	Dish Food 8	Food 9
			Bt.	Stg.					
<u>Meal Time</u>									
4:30 a.m.									
Cooked rice	Polished	2180-800 = 1380					800 120 190	2990 1280 850	2190 1160 660 5010 ¹ 465
(1) Bauauun stew	(leftover)						420	915	
(2) Sa-(5)noo stew	Coconut meat (to make milk)	700-180 = 520		90		520)			
	Dried chillies	24		15		24)			
	Onion	8		4		8)			
	Galangal (HG) ²	8		4		8)			
	Garlic	4		2		4)			
	Lemongrass (HG)	12				12)			
	Bergamot rind (G) ²	4				4)	420	1390	940
	Salt	30				30)	130	312	182
	Serpenthead (C) ²	320-120=200				200)	130	300	170
	Shrimp paste	6		3		6)	130	260	130
	(2)Sa-(5)noo flowers (G)	550			550-520 = 30	640-190 = 450 1220-450 = 770 40)			1427
	Coconut milk								
	Palm sugar	240-200= 40		24					
Cooked rice	(leftover)						520	800	280
Fried duck egg	1 Duck egg	76			21	240-185 = 55			
	Coconut oil	16		8		16)			
	Onion	4		2		4)			
	Fishery	10		5		10)	130	260	80

1. T equals total weight.

2. HG, G and C stand for home grown, gathered and caught, respectively.

2. Hanch et al. D.E-5 (1951-1954) 1958 AOT Central Thai AOT
Bang Chai

Food Preparation and Consumption (continued)

Household No. 222, June 1953

120

K. Snacks

Person eating 1	Time 2	Kind and description 3	Weight (or approx. wt.)			Cost 7
			A.P. 4	Ind. ref. 5	S.P. 6	
						Bt.:Stg.
June 4/53			E.	E.	E.	
Girl, 8 yrs.	12:00m	She ate a half fruit of pineapple at home. It was bought from the selling boat.	(375)	(195)	(180)	20
June 5/53						
Girl, 8 yrs.	All day	7:40 - The pot of truffles (gathered from the fields) is put on fire. It is boiled with water and salt.				
Boy, 10 yrs.		Truffles: 525-72 = 453 gm.	453			
Girl, 13 yrs.		Salt: 35 gm.				
		It is finished at 8:28.				
Boy, 10 yrs.	8:46	He eats boiled banana (WG)	48			
Girl, 13 yrs.	Early a.m.	She drinks coffee which is bought from the store near the Wat.				9
Father	10:13	He drinks one glass of milk which is bought from the store near Wat.				8

Z: Mauck et al. D.E-5 (1952-1954) 1958 A07 Central Thai A07 Bang Chao

THE VILLAGE OF BANG CHAN

19

been religious in nature—getting the assistance of villagers to construct monks' cubicles or repairing the small rest pavilions near the monastery, the "pay" for which is Buddhist merit—or, if secular, infused with sacred attributes, such as when the head monk helped raise funds for the construction of the Bang Chan school by supporting the notion that villagers who gave money to the school would make merit. It is clear, however, that the organizational vigor of the Bang Chan monkhood is mainly a function of the aggressive personality and leadership of Bang Chan's particular abbot, and that with a more retiring, contemplative head monk—a not uncommon or undesirable role for an abbot—the situation would be strikingly different.

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In a similar vein, it is difficult to link the incidence of land ownership and tenancy in Bang Chan with any consistent national or regional pattern. At the national level, Thailand is fortunate among predominantly peasant nations in having a comparatively low level of land tenancy, an estimated 80 percent of the cultivated land of the country being owned by the small, independent farmers who work it (National FAO Committee of Thailand 1949). However, within these broad, national parameters there is considerable inter- and intra-regional variation. Zimmerman's study in the early 1930's indicated that the number of peasants without land ranged from 14 percent in Southern Thailand, through 27 percent in the North, to 36 percent in the Central Plain. These regional figures seemed to have remained relatively constant through the years in that deYoung (1955) reports a tenancy figure of 27.7 percent for a village in the North which he studied in 1949, and Janlekha (1955) indicates a figure of 37 percent for Bang Chan, in the Central Plain, in 1953.⁴ As close as the Bang Chan figure may seem to its regional average, however, it is of little significance when seen against the background of variability that exists within the region as a whole: for example, in villages near the city of Lopburi, only 12 percent of the villagers are landless, but in the Khlong Rangsit area, not far

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⁴ It should be noted, however, that other indices of economic well-being in Bang Chan have not remained constant. To the extent that his historical materials permit, Janlekha (1955) points out that land holdings have become increasingly smaller, the amount of time newly-married couples must live with one set of parents (in order to accumulate the capital necessary for setting up their own neolocal households) longer, and the price of land higher. Janlekha's data indicate that in the five-year period between 1948 and 1953 alone, the price of agricultural land, as contrasted with considerably more expensive residential land, in and around Bang Chan increased 560 percent!

It is also well to keep in mind Janlekha's observation that, depending upon familial circumstances such as number of children and availability and proximity of labor, a Bang Chan farmer who rents a large plot of land from a benevolent absentee landlord, who is often unfamiliar with Bang Chan crop values, may be considerably better off economically than a farmer who works a small plot of land that is all his own.

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17.d. And what was the total yield at that time?

1. 120 tang or less	30
2. 121-300 tang	14
3. 301-600 tang	62
4. 601-900 tang	64
5. 901-1200 tang	50
6. 1201-1500 tang	23
7. 1501-1800 tang	20
8. 1801-2100 tang	8
9. 2101-2700 tang	7
X. 2701 or more tang	4
O. Unascertainable	31

e. And how many rai did you plant two years back?

1. 4 rai or less	18
2. 5 to 9 rai	17
3. 10-19 rai	45
4. 20-29 rai	72
5. 30-39 rai	52
6. 40-49 rai	26
7. 50-59 rai	18
8. 60-69 rai	12
9. 70-89 rai	4
X. 90 rai or more	—
O. Unascertainable	29

f. And what was the total yield that time?

1. 120 tang or less	30
2. 121-300 tang	14
3. 301-600 tang	48
4. 601-900 tang	69
5. 901-1200 tang	38
6. 1201-1500 tang	8
7. 1501-1800 tang	7
8. 1801-2100 tang	5
9. 2101-2700 tang	4
X. 2701 or more tang	2
O. Unascertainable	69

18. ASK ONLY FARMERS:

a. Have the changes in the price of rice during the last two or three years caused you any worry, or not?

7. Yes	196
8. No	104
9. Unascertainable	33

b. IF YES: What are you doing about it?

(See code at end)

[243]

19.a. Do you, at present, have your own home rice mill, or not?

1. Yes	105
2. No	226

	<u>Qn 11</u>	<u>Qn 12</u>	<u>Qn 12a</u>	
1. Positive, no evidence: very good, good, nice	103	114	77	125
2. Positive, with evidence: good results, specific statements	47	180	95	241
3. Neutral or mixed	11	20	6	244
4. Negative, no evidence: no good, bad, of no use	9	5	15	228
5. Negative, with evidence: difficult to apply in deep water, must keep using it, too expensive, some results as without fertilizer	33	13	80	
6. Positive, qualified: Fertilizer too expensive	13	—	1	
7. Positive, qualified otherwise: only for high land; very hard to purchase; requires to keep on using it	32	18	18	
8. Respondent states he has no opinion	54	31	26	
9. Negative, qualified: It's not quite good, it depends on the soil	4	4	3	
10. No answer	4	3	1	
11. Respondent's attitude not ascertainable	23	5	11	

	<u>Qn 12b</u>	
0. D.A.	85	125
1. Too expensive	78	241
2. Difficult to purchase	15	
3. Not fit for low land	39	
4. Soil not suitable	3	
5. No ascertainable reason given	28	
6. Too little land	7	
7. Other reasons	56	
8. Have never used it before. Do not now either	12	
9. N.A.	205	
10.	21	

	<u>Qn 12c</u>	
1. N.A. Unascertainable	60	125
0. D.A.	151	243
1. Nothing, cannot do anything	70	435
2. Grow mushrooms	12	458
3. Raise poultry	15	
4. Raise fish (including Tilapia)	7	
5. Use fertilizer	—	
6. Find job as laborers	6	
7. Others: try to find new seed, sell vegetables, borrow money from neighbors, keep rice until price goes up, economize, send sons to work	24	

583 the sanction of parents or guardians of either party. The latter case took the form of elopement -- the man taking the woman away from her family usually during the night and returning for pardon (normally granted) a few days after-

587 ward. Another intermediate type of marriage was common among independent family heads, usually widows and widowers, in which case the man and woman simply came to live with each other. Marriage between widows and widowers who had been living in their respective families as dependent mem-

583 bers also took this simplified form. Finally there was also marriage by capture, one case of which was reported during 1949-53 when a daughter of a laboring family in BC4 was kidnapped by a group of men who were allegedly helping a friend of theirs take the woman as his wife. Although this dramatic kind of marriage by capture was often spoken of, actually it rarely happened in the village. Even in the single case just mentioned, there was doubt on the part of fellow villagers that the victim was really ignorant of the plan.

583 In our records of major expenses of 96 families of
615 farm operators⁸ during the period from 1949 to 1953, three
435 families reported expenses for conventional marriages. These expenses were for 1700, 6200, 7500 and 7500 baht for four sons which were dowries, in gold and cash. They were handed over to the brides' parents on the wedding day. Another family reported an expense of 5,300 baht for the marriage

8. See Chapter 6 as to how sampling for these 96 families was done.

583 of their adopted daughter, of which some 300 baht went to
585 bedding materials and 5,000 baht to the wedding feast which
• 435 the bride's parents alone were supposed to give. It should
be noted, however, that in this last case the bride's par-
ents received as dowry from the bridegroom's parents 4,000
baht in cash and two baht⁹ weight of gold worth about a
thousand baht, and they also received from the guests an
aggregate customary contribution of 2,360 baht. Thus, the
bride's parents came out with a net gain of 1,080 baht plus
the gold which was to be given to the bride.

589 While the conventional marriage was somewhat costly
especially for the bridegroom's party, the popular marriage
by elopement was much less expensive. Our records show that
in addition to nominal ceremonial materials of white cloth,
candles and incense, the bridegroom had to pay a fine of
only a few hundred baht to his wife's parents when the couple
came to receive formal forgiveness from them.

We do not have comparative figures for the occurrence
of conventional marriage and elopement, but the latter ap-
peared very frequently in our daily field notes as against
very few cases of the former.

591 There are two types of establishment of new families
184 after marriage: (a) immediately after marriage, and (b)
some years after staying with parents of either party.

It was observed that immediate establishment of new
families after marriage was common among couples originating
from farm laboring families and families of poor farm operators.

[204] 9. One baht weight is equivalent to fifteen grams.

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434 1949-53, in actuality public service as an occupation is
463 increasing in Bangchan.

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There were four home enterprisers in 1949, mostly engaged in making cookies. As in case of the professional, this activity still existed in Bangchan, but by 1953 it had degenerated into a secondary income, leaving the lone case of basket making in the home enterprise category.

Only one family head was classified in 1953 as a home-enterpriser. The family was engaged in making takraw -- a cane utensil used in picking mangoes from the tree. On January 27, 1953 we met A, the head of this family, who was taking 103 takraws of various sizes to sell in Bangkok.

- (435) A gave the amounts and prices of these takraws as follows: 56 large size, @ 3.00 baht; 31 medium size, @ 2.50 baht; 16 small size, @ 2.00 baht. A said he and his wife worked on these 103 takraws alone, and finished them in twelve days, using 50 baht worth of materials including cane, wood, and binders. Ordinarily, they started making takraws in December and continued through May. They were able to make about 3,000 baht within this period. They also made other things like baskets, but takraws were their main source of income. In rice growing season, they also did some piece working. They did not operate a farm. Piece working and basketry during rice growing season brought them a combined income of about 2,000 baht. The amount of each kind of

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basketry they made was not as constant as takraws. It depended more on which paid best. Their total annual income

Other Food Production

235 Other food products which are produced in a considerable
433 amount in Bangchan include chicken eggs, duck eggs, and fish. To a lesser extent, fruit and vegetables are also produced locally.

Practically every family in Bangchan raises chickens, and half raise ducks. In April, 1949, the author conducted a poultry survey covering 46 families whose homes were on the banks of Bangchan Canals. Of these, 45 families were found to be raising chickens and 23 families raising ducks.

Of 45 families raising chickens, 38 families from which data were available reported rates of egg production showing that for these families 53,750 eggs were produced annually from 376 laying hens, averaging 143 eggs per hen.

[146] Of 31 families who gave information about sales, five consumed
[438] all 2,260 chicken eggs produced; the other 26 families sold 31,040 eggs and consumed 5,590. The proportion of consumption to sale was thus 7,850 to 31,040 or approximately one to four.

There were 393 laying hens in the yards of 45 families, averaging 8.6 hens per family. Chicken egg production was estimated at 1,230 per family. Assuming that four-fifths of these were sold at three for one baht, which was the local price in 1949, average cash income for these families from sale of chicken eggs was estimated at 325 baht annually.

[435] With a higher price in 1953 of fifty satang a piece, the estimated income from sale of chicken eggs rose to 492 baht per family.

235 Of the 46 families covered by the survey, 23 or one-
433 half raised ducks with an average annual production of 155
434 eggs per duck, and an average of 11.7 ducks per family
raising them. Egg production for each of these families
thus averaged about 1,200 per year. Of these, 1,350 were
consumed by the family and 450 sold at the same price as
chicken eggs. It was estimated, then, that from duck eggs
alone, the average cash income in 1949 was about 150 baht
per family raising ducks.

226 After rice, fish were by far the most important
262 ingredient in the diet of Bangchan. In contrast to poultry,
413 however, fish did not constitute a source of cash income of
[434] the villagers. As a matter of fact, more fish were bought
from the outside than the negligible amount that was exported
from the village mainly by one or two very poor families
who had availed themselves of this means of augmenting
• [435] their income. From our consumption study of 106 families
in 1953, it was found that of an aggregate amount of 17,786
kilograms consumed by these families in the previous year
16,027 kilograms were caught by the families while 1,759
kilograms were bought at five baht per kilogram. The rate
of fish production may thus be estimated at 151 kilograms
annually per family, or 44,998 kilograms for the entire
village.

262 The same consumption study shows that the 106 fami-
244 lies consumed in 1953 a total of 18,402 kilograms of vegetables
433 all of which were produced or acquired by the families,

*243 of village production and surplus of paddy (Table 16) there
433 were no comparable basis for our estimate of the other crops.
*121 Our estimates of these other crops should therefore be considered as crude estimates.

433 Tables 16 and 17 show that in 1953 Bangchan had
431 surpluses of 104,756 tang of paddy, 293,232 chicken eggs,
• 435 and 67,050 duck eggs, and a deficit of 4,945 kilograms of fish. Using the 1953 farm prices of 9 baht per tang of paddy, 0.40 baht per chicken egg, 0.50 baht per duck egg, and 5 baht per kilogram of fish, village exports may be estimated at 942,804 baht for paddy, 146,616 baht for chicken eggs, and 33,525 baht for duck eggs, and village import of fish may be estimated at 24,725 baht.

*243 Land Tenure

311 Table 18 shows that Bangchan residents owned an aggregate area of 4,315 rai. Since their combined area planted
423 to rice was 6,722 rai, the balance of 2,407 rai had to be
427 provided by absentee landowners. In fact an area larger than 2,407 rai had to be rented in because part of the area owned by local residents had to be used as homelots. Actually, the net area rented in was 2,438 rai (total area rented in of 3,641 rai minus total area of 1,203 rai rented out). It is not to be expected, however, that this extra area of 31 rai (an excess of 2,438 over 2,407 rai) is enough to accommodate the 298 homelots in the village. Inaccuracies
*121 might have arisen in cases of joint ownership of certain

Rent of Rice Land

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Tables 24 and 25 show different rental methods in 1948 and 1952. Figures in Table 24 were obtained from our records of the sample of 104 farms in operation in 1948, and figures in Table 25 were obtained from the same sample reduced in 1952 to 96 farms which had been continuously in operation until then, the other eight farms having ceased to operate by 1952.⁸

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It is seen that with the exception of a single case of share-cropping there were two rental methods in 1948, in kind and in cash, the proportion of areas involved being fifteen rai of rent in kind to every rai of cash rent. In 1952 rental methods remained more or less the same, consisting principally of rent in kind and cash rent, the proportion of areas involved being slightly increased to nineteen rai of rent in kind to every rai of cash rent.

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There was, however, a rapid rise in rent rates within this period of four years. It is seen that the average rate of 6.2 tang per rai in 1948 has risen to 8.1 tang per rai in 1952, an increase of 31 per cent in four years.

[433]
It is interesting to note that an increased rent rate was charged in spite of the decline in yield of 32.1 tang per rai in 1948 to 25.2 tang per rai in 1952, or from the record crop index of 111.4 in 1948 to 87.5 in 1952 (Table 14).

[434]
Another equally interesting point is that the increase in rent rate was charged in spite of the increases in the E. See Chapter IV of the sampling technique.

[TEXT CONTINUED ON PAGE 143]

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TABLE 24
DIFFERENT RENTAL METHODS
Bangchan, Thailand, 1948*

Rate Per Rai	Rate in Tang Equivalent	Number of Parcels Reported	Total Area	Total Rent**
Kind			rai	baht
3 tang	3.0	1	11	259.38
5 tang	5.0	29	623.75	24,513.53
3 1/2 tang	5.5	1	15	648.45
6 tang	6.0	22	390	18,392.40
7 tang	7.0	15	313.50	17,248.77
8 tang	8.0	28	495.50	31,157.04
Cash				
12.50 baht	1.6	1	8	100.00
30.00 baht	3.8	6	91.50	2,745.00
41.38 baht	5.3	1	14.50	600.00
50.00 baht	6.4	1	6	300.00
Share				
50% of crop	--	1	10	--
Unspecified	--	1	20	--
Total	--	105	1,998.75	95,964.57
Average	6.2	--	1	48.89

- * From the preliminary study of Bangchan, page 149.
 ** The 1949 farm price of 7.86 baht per tang was used.
 -- Not available.

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TABLE 25
DIFFERENT RENTAL METHODS
Bangchan, Thailand, 1952

Rate Per Rai	Rate in Tang Equivalent	Number of Parcels Reported	Total Area	Total Rents*
			rai	baht
Kind				
6 tang	6.0	5	75	4,050.00
7 tang	7.0	16	353.50	22,270.50
8 tang	8.0	39	876	63,072.00
9 tang	9.0	3	39	3,159.00
10 tang	10.0	6	113	10,170.00
Cash				
40 baht	4.4	1	46	1,840.00
50 baht	5.6	3	15.50	775.00
70 baht	7.8	1	16	1,120.00
Free	--	4	(84)	--
Total	--	78	1,534	106,456.50
Average	8.1	-	1	72.66

- * The price of 9 baht per tang was used. It should be noted, however, that while the farm price of 7.06 baht per tang used in Table 24 was a result of a day by day record of actual sales during the first selling period (December-March) comprising about two-thirds of marketable paddy of 104 operators studied in 1948-49, this price of 9 baht per tang was not as systematically arrived at because we could not afford as much time in the 1952-53 study. This 9 baht was simply a rounded rental price during the first selling period of the 1952-53 rice year (December 1952-March 1953).

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other items of cost of producing paddy -- in other words, in spite of a decline in profit (a great decline when a reduced yield is also considered). In the preliminary study in 1948-49, it was found that the average cost of producing a tang of paddy was 3.86 baht, all costs included except value of operators' labor.⁹ When the value of the operators' labor of 1,000 baht for those operating ten rai or over and of 500 baht for those operating less than ten rai was included in the calculation, the cost of production was found to be 6.76 baht per tang, including 1.52 baht for rent, 3.46 baht for labor (values of operators' labor and family labor included), 0.38 baht for seeds and materials, 0.65 baht for depreciation, and 0.75 baht for interest on investment. As we shall see in the section on cost of producing paddy in Chapter VI, an estimate of cost using the 1952 prices, for time and opportunity did not permit a second cost of production study during our second period of field work in 1952-53, points toward an increase in every item of the cost of producing paddy in Bangchan.

An explanation for this abrupt rise in rental of rice land in Bangchan lies in the nature of the demand for and supply of rice land. Although rents may be surpluses

[128]

9. Sharp et al., *op. cit.*, p. 171. In this preliminary study, the cost of family labor was imputed (at going wage rate) for labor requirement based on acreage, the cost of the use of the operator's own land was imputed from going rent rate, and the depreciation cost was calculated by dividing the original cost of equipment by their respective expected length of service.

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178 from certain points of view, or for certain purposes, or
427 subject to certain interpretations, they are to the indi-
434 vidual producer no different from any other money expense.

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They do not arise as a surplus from his own operations;
they are a cost rigidly imposed upon him by the competition
of his rivals for the use of the rent-yielding property.
They figure in the same way as do wages of labor and the
interest of capital in his computations as to the most ad-
vantageous proportion between the factors and as to the most
advantageous scale of operations.¹⁰ Naturally, we are now
dealing with contractual rent, which is the actual sum paid
by the tenant to the landlord for the use of the land, not
the hypothetical economic rent of the classical economists.

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The preliminary study revealed that there was in
1948 under-employment on some Bangchan farms in terms of
rai worked per worker. This was shown by comparing the
number of rai worked per worker on 94 farms employing no
hired laborer with the number of rai worked per worker on
10 farms employing one or more hired laborers. On the farms
where only family labor was used, the figure was 9.4 ad-
justed rai per worker; while on those farms which used
regularly hired laborers along with family labor, the figure
was 13.4 adjusted rai per worker. (Each rai of transplanted
rice was counted as one adjusted rai, while each rai planted
by the less-labor-requiring broadcast method was counted as
one-half of an adjusted rai.) An assumption was made that

10. Edward Chamberlin, The Theory of Monopolistic Competition
(sixth edition; Cambridge: Harvard University Press,
1950), p. 22.

*243 As long as farm under-employment prevails and as
434 long as limited opportunity for an alternative occupation
464 is open to farm operators and farm laborers, we have reason
to believe that the demand for rice land is rather inelastic.
Another important factor contributing to this belief is the
operator's concept of cost of producing paddy which seemed
to include only explicit rent (actual amount paid to the
• [435] landlord) and cash operating expenses. Thus, while our
calculation shows that the cost was 6.76 baht per tang or
215 baht per rai in 1948, the figure would be only 1.71
baht per tang or about 55 baht per rai according to the
operator's concept of the cost.

*243 Under the conditions of farm under-employment, a
427 tenant, part-owner, or even owner-operator is willing to
464 pay high rent for an additional parcel because a larger
178 worked area would cost him only the additional explicit
435 rent and a small increase in seeds and materials. Unless
the extra rented parcel is so large that extra labor must
be sought outside the family, he does not have to pay any
explicit wage at all for rice production in this additional
parcel. Landlord-operators, on the other hand, are under a
different situation, for they may rightly be considered land
saturated and fully employed. Hence, the individual demand
for working land on the part of a landlord-operator is
relatively more elastic than those of the other farm oper-
ators. As rent rose from 6.2 tang per rai in 1948 to 8.1
tang per rai in 1952, it was observed in Table 26 below that

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7: Janleka X-4.5 (1948-1953) 1956 A07 Central Thai A07
Bangchan

TABLE 26

RELATIVE SENSITIVITY TO CHANGE IN RENT RATES OF LANDLORD-OPERATORS AND OTHER GROUPS

Category	Area Operated					Decrease, 1948-52	
	1948	1949	1950	1951	1952	Actual	Per Cent
	rai	rai	rai	rai	rai	rai	
Landlord-operator							
Farmer A	110	100	80	70	65	45	41
Farmer B	80	80	50	8	8	72	90
Farmer C	75	75	75	75	75	0	0
Farmer D	65	70	60	70	60	5	8
Farmer E	47	47	47	47	47	0	0
Farmer F	26	26	26	5	5	21	80
Farmer G	24	0	0	0	0	24	100
Sub-total	427	398	338	275	260	167	39
Other groups of farm operators	2,981	2,732	2,764	2,764	2,786	195	7
All 104* operators	3,408	3,130	3,102	3,039	3,046	362	11

* The sample consists of 104 operators in 1948, 103 in 1949, 98 in 1950, 96 in 1951, and 96 in 1952.

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landlord-operators were more sensitive to the change in
rent rates than were the other groups of farm operators.

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Limited opportunity for an alternative occupation
was mentioned in the preceding paragraph as one of the
factors contributing to the inelastic nature of demand for
working land. It was also mentioned in the section on the
occupational structure of Bangchan that farm laboring fami-
lies as existing in the village were indigenous and were an
outgrowth of competition for land coupled with the reluc-
tance to emigrate on the part of those who failed to rent
[443] in any land. Limited opportunity for an alternative occupa-
tion in the village was also suggested in the same section
when it was mentioned that the only possible alternative --
petty trading which was actually taken up by some former
farm operators -- was limited by the fact that villagers
bypassed local traders and went to the nearby market town
of Anburi for major purchases and variety goods.

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Limited opportunity for an alternative occupation
outside the village, however, needs elaboration. It cannot
be denied that wages in Bangkok, only twenty miles away and
easily accessible through good road and bus services, were
higher on the average than corresponding returns for labor
in the village. It is important to note, however, that
what will attract a villager to seek a job in Bangkok is
not a higher average wage level in the city but a higher
marginal wage there. Regarding the marginal wage, it is
highly doubtful that a better condition exists in Bangkok.

427 neighboring landlords are under the same situation as the
434 non-operator landlords. Yet these two groups are in a better position than the absentee landlords, for they are already in the locality. They are used to farming, and at least they do not have to invest on housing if they should choose to operate their own lands instead of renting them out at low rent.

427 It was observed in the preliminary study that rent
• (435) rates charged by local landlords were higher than those charged by the absentee landlords, the former ranging from six to eight tang per rai while the latter was only five tang per rai.¹³ The discrepancy was assigned to the fact that local landlords were in a better position to sense the competition for land among farmers desirous of obtaining more land than were landlords who lived in the city. Local landlords were thus quicker to adjust rent rates to their own benefit.

Another advantage of renting land from absentee landlords was pointed out by a Bangchan tenant who said that he preferred absentee landlords to local landlords. "If you don't want to pay too much rent," said he, "you may report to the absentee landlord that you got a poor crop even though it was the best crop you ever had. You cannot do so with a local landlord, for he knows as well as we know by a glance at the parcel how many tang of paddy we are going to get." "Besides," the man continued, "local landlords often make request after request for your free
13. Sharp et al., op. cit., p. 146.

427 author's father who gave this man an initial capital of 600
556 baht when he made his start in Bangchan some thirty years
ago. He is now a millionaire and a father-in-law of a
former top military officer.

427 Again it is the author's impression that, from the
viewpoint of the villagers' best interests, the good side
of absentee landism seems to outweigh the bad side.

427 Going back to the forces of demand for and supply of
434 rice land, it should be noticed that, as was so often the
435 case, free competition in the classical economist's sense
did not exist in Bangchan where rents were often sticky.
There was a wide range of different rent rates for fields
of almost homogeneous nature as far as agronomic properties
were concerned. Preference for prospective tenants was
observed to have a personal rather than economic basis even
on the part of the local landlords who were found to be most
sensitive to rent rates. When a new higher rent rate was
to be charged, it was observed that the most plausible excuse
had to be found and presented to the tenants by the landlord.
An example was the general raise of rent in 1953 when the
new land tax was raised from 0.30 to 4.00 baht per rai,
whereupon most local landlords immediately raised their
rent from seven tang to eight tang per rai. One tang of
[51] paddy, however, was worth nine baht. It is seen, thus, that
as a result of an increase of the government revenue of 3.70
baht per rai the local landlords also received an extra
5.30 baht per rai from their tenants who alone had to suffer
an increase cost of nine baht per rai.

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In discussing the forces of demand for and supply of land in the few preceding pages, it is not the purpose of the author to quantify these forces and attempt to predict rent or the price paid by the tenant for the control of net income deriving from the use of the productive powers of the soil. Rather, the purpose is to confirm in this specific case Chamberlin's general notion that "the equilibrium of economic forces has been wrongly identified with an equilibrium between demand and supply. The latter is merely a special case of the former. Curves of demand and supply tell nothing, either by themselves or by their intersection, as to what price will be established, until other conditions are known."¹⁴

Prices of Land

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One of the most significant phenomena during the period covered by this study, from 1948 to 1953, is the rise of prices of land in Bangchan.

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• [123]

Records of major receipts and expenses of 96 farm operators who have been continuously working on an average area of 3,140 rai, or 47 per cent of the total area worked by Bangchan residents, show that during this six-year period two operators sold two parcels of land and ten operators bought eleven parcels of land. Since none of these involved transaction between one and the other in our sample of 96 operators, it can be said that there was a total of thirteen

¹⁴, Chamberlin, op. cit., p. 15.

423 purchases (or sales) of land involving operators in our
432 sample as either sellers or buyers. The price and size
as well as the time of sale of each parcel is shown in

178 Table 27. Using the highest of each year as the basis,

435 it is observed that land price in Bangchan has been rising

423 steadily from 350 baht per rai in 1948 to 700 baht in 1949,

to 1,100 baht in 1950 and 1951, and then rose skyhigh to

11,000 per rai in 1953. To be sure, this spectacular rise,

especially from 1951 to 1953, was largely due to the chang-

ing over of former agricultural to residential land. Never-

theless, when residential land is excluded from considera-

tion, it is seen that the average rise in agricultural land

prices was 560 per cent during the period from 1948 to 1953

(Table 28).

Perhaps a case of one large parcel in "Thung Nai
Sab" in KY5 may serve to illustrate the way land prices rose
in Bangchan during these past few years. The area of this
parcel, which was owned by Lady Phung of Bangkok, was 100
rai. Our informant's father, Hajji Sa-ard of Bangchan
Mosque, was interested in this parcel of land because it
was adjacent to his land which was not far away from his
home. In 1946, Lady Phung was willing to sell it at 300
baht per rai, but Sa-ard was reluctant or not quick enough
to accept this offer for sale. In 1947, the lady raised
her price to 350 baht and Sa-ard was ready to buy. This
time it was hesitancy on Phung's part that prevented the
proposed purchase from being consummated. In 1948, our

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TABLE 27
PRICES OF RICE LAND ACTUALLY SOLD OR PURCHASED
Bangchan, Thailand, 1948-53

Year	Parcel Size	Price Per Rai		Highest Price of the Year	Average Price of the Year
		rai	baht		
1948	11		350	350	223
	12		180		
	16		138		
1949	10		700	700	700
	10		700		
	10		700		
	10		700		
1950	1		1,100	1,100	850
	10		600		
1951	19 1/2		1,100	1,100	721
	10 1/2		1,000		
	19 1/2		250		
1952	--		--	--	--
1953	1		11,000	11,000	11,000

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TABLE 28
ESTIMATED PRICES OF BANGCHAN LAND BY ZONE
SHOWING PRICE CHANGES FROM 1948 TO 1953
Bangchan, Thailand, 1948-53

Zone*	Location	1948-Price baht/rai	1953-Price baht/rai	Increase	
				baht/rai	Per cent
Residential:					
1	Roadside** (200 m. depth)	300	12,000	11,700	3,900
Agricultural:					
2	*Thung Nai Sab*-	270	1,500	1,230	456
3	*Thung Nai Pho*	280	1,800	1,520	543
4	*Thung Kl. Kred*	250	2,000	1,750	700
5	Kl. Kred - Kl. Bangchan	230	1,500	1,270	552
6	Kl. Krached-Kl. Bangchan	210	1,500	1,290	614
7	Kl. Bangchan-Kl. Kralog	200	1,200	1,000	500
	Av. for ag. land	240	1,583	1,343	560

* See Map I.

** In 1948, this zone was still considered agricultural land -- not residential land as it was in 1953.

T: Janleka X-4,5 (1948-1953)p956 A07 Central Thai A07
Bangchan

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423 informant said that some of the lady's tenants who had been

• 435 renting the parcel told her that she should not let it go under 500 baht per rai. Our informant thought that these tenants did not want to see any transfer of the ownership of the parcel for fear that it might adversely affect their prospective tenure. Lady Phung therefore raised her price to 550 baht. At this price Sa-ard gave up his intention of buying the land. In 1949, four tenants (all are included in our sample of 96 farm operators, hence the purchases are shown in Table 27) jointly purchased 40 rai of this parcel, and one Nai Ma of Klong 13 bought the remaining 60 rai of the 100-rai parcel at 700 baht per rai. The four tenants divided the land equally among themselves (10 rai each) and paid 7,000 baht each with borrowed money. In 1952 an offer to buy at 1,000 baht per rai was made for the same parcel but none of the new owners wanted to sell any of his land. In 1953 the price rose to 1,500-2,000 baht per rai and again none of the owners contemplated selling his land. Of the four tenants, Farmer A was luckiest because his share was attached to the Minburi Road and the price of this specific portion has risen to somewhere around 12,000 baht per rai.

The case just mentioned shows one significant point regarding the price of land in Bangchan other than the steady rise -- that nearness to the road was not a factor of price distinction until after 1949, for if it was, there would certainly have been some difficulty in dividing the 40-rai piece among the four tenants.

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Table 28 shows estimated prices of land in Bangchan in 1948 and in 1953. These prices are estimates made by our informant who is a son of Hajji Sa-ard mentioned in an earlier paragraph. He is one of the best informed persons in the village, has visited Mecca, and has received a higher education than any other person in Bangchan with the possible exception of one store-keeper who had spent a few years in the Military Academy in the 1910's.

Our informant, who will henceforth be called by his real name -- Hajji Direg, based his estimates of land prices in Bangchan on what he was willing to pay. He was aware of locational variation in prices of land in the village. Strictly speaking, this is not contradictory to our assumption of homogeneous nature of soils in Bangchan, for slight variation in Direg's estimated prices was due, according to him, to differences in the land levels which affected the cost of irrigation and drainage. Direg divided Bangchan into seven land-price zones (Table 28 and Map I). It is seen in this table that the 1948 price ranged from 200 baht per rai in Zone 7 to 300 baht per rai in Zone 1, averaging 249 baht per rai.

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Table 28 shows that the average price of agricultural land in Bangchan rose from 240 baht per rai in 1948 to 1,563 baht in 1953; an increase of more than five times in six years. Most remarkable was the increase of the price of land in Zone 1 from 300 baht per rai to 12,000 baht per rai. The increase in the price of land in Zone 1 shows that land

178 in this zone has since been considered as residential land
423 although there has not been any apparent change in land
• 435 utilization.

178 It should be noted in this connection that during
423 the same period of 1948-53 there has been a steady rise in
435 the price of residential land in Bangkok at a highly vary-
ing rate depending upon location. For the purpose of our
discussion, we may consider only the price of land in the
northern suburb of Bangkok, on each side of Paholyotin Road
(the popular Bangkok-Donnuang Road) which branches off at
Kilometer 20 into Minburi Road which cuts across Bangchan
Canal at Kilometer 13 (Crossing of Paholyotin and Minburi
Roads as Km.0). It has been observed that the price of land
on each side of Paholyotin Road has been increasing rapidly:
a parcel at Km. 11 which was valued at 50,000 baht per rai
in 1952, for example, was sold at 150,000 baht per rai in
1954. It has also been observed that price of land in this
section of the Bangkok suburb declines with the distance
from Bangkok proper: the 1954 price was 150,000 per rai
at Km. 11, and 50,000 baht per rai at Km. 20 where the
Minburi Road begins. If the Minburi Road is considered
as a continuation of Paholyotin Road, it is only natural
that the price of land would gradually decline to 12,000
baht per rai at Km. 13.

182 It is conceivable that the recent increase in Bangkok
423 population is one among several factors causing the rapid
435 rise of residential land prices. When the rapidity of the
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423 rate of increase in land price is considered, however, it
435 is reasonable to believe that population increase is cer-
369 tainly not the only factor.

[121] It is not the purpose of this study to deal with the
price of urban land. Neither the problem of land utiliza-
tion nor the whole economy of Bangchan can be clearly under-
stood, however, without some account of the rapid building
up of urban land prices in recent years. It is thus neces-
sary to digress at this point into some factors accountable
for this rapid rise.

369 It has been observed that the volume of domestic
454 saving in Thailand is small because of the low level of in-
423 come, and that such saving as does take place tends to be
435 put into real estate and gold and jewelry. Concentration
178 of income resulting from the postwar phenomenon of shifting
182 of political and economic power into the hands of few people,
however, has somewhat increased the proportion of saving;
but this is again used largely to purchase real estate. The
natural result is the boosting up of urban land prices
especially in the suburban sections where there has been
a relatively high degree of improvement in road construction
since the war.

423 This investment in land purchase has more than ever
45 before assumed a speculative nature. This is largely due
178 to the experience of inflation initiated by World War II
369 whereby huge and easy profits could be made from buying
182 and selling of land. Corruption in the sale and purchase

423 of government real estates has no doubt increased these
45 speculative activities. The process has also been greatly
178 accelerated by an enormous increase since the war of banking
369 facilities, which traditionally extend loans on mortgage of
182 real estate. It should be noted in this connection that
the demand for loans in Bangkok has been so great as to
allow most commercial banks to adopt a highly discriminating
policy of extending loans only to their favored customers
who are often willing to give as much as five per cent of
the loan sought to bank officials as a customary "tea-money".

182 A third factor is that some organized financial
423 institutions have actively been engaged in deliberate at-
435 tempts to boost up land prices for their own speculative
455 gains. This was the immediate cause of the rise of land
178 price in Zone 1 from 300 baht per rai in 1948 to 12,000 baht
369 per rai in 1953. According to several informants in Bangchan,
a representative of an insurance company in Bangkok came
to the village in 1952 and offered to buy land on each side
of Minburi Road at 10,000 baht per rai. This man was able
to buy 20 rai of land at Km. 8, Minburi Road, which is in
the immediate neighborhood of our arbitrary Bangchan Village,
at his offered price of 10,000 baht per rai. At the time
of the signing of the purchase contract, he made a 10 per
cent down payment of 20,000 baht. Although the balance of
180,000 baht was not paid and the contract was later for-
feited, the proposed purchase immediately pushed land prices
in Zone 1 up to 10,000 baht per rai or over. According to

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423 cur informants, the insurance company owned hundreds of
• 435 rai of land in the vicinity. By spending only 20,000 baht
456 in boosting up land prices, the company thus set the stage
178 for making a large profit through sale of their own land
367 at inflated prices.

178 While the increase in land prices in Zone 1 was
429 attributable to the sudden assumption of residential land
435 prices, this explanation does not apply to the increases
in land prices in the other zones which have remained agri-
cultural throughout. Although less spectacular than the case
of Zone 1, the rise in land prices in these six zones was
also quite abrupt, averaging 560 per cent for the five-year
period from 1946 to 1953 (Table 28).

428 Capitalized valuation of these farm lands (Zones
434 2-7) may shed some light on the situation, although there
427 is limitation especially to the cost concept. There are two
ways by which a capitalized value of farm lands may be obtained:
(1) by capitalizing income from the farm operation left after
payment of all factor costs except land, and (2) by capital-
izing income deriving from explicit rent of the land.

*243 Receipt from one rai of rice land in 1948 may be cal-
435 culated from the crop of 32.1 tang at 252 baht, using that
434 year's average farm price of 7.86 baht per tang of paddy.
423 When the cost, including an imputed return to all labor but
427 excluding rent, of 166 baht per rai is deducted, a residual
return to land of 86 baht per rai is obtained for the year.¹⁵

15. For want of sufficient data, it is assumed that the cost
items other than rent remain the same.

243 In 1953, figure for the size of the crop was not
423 available, but we may use the 1948-52 average of 28.8 tang
434 per rai. With the year's farm price of 9.00 baht per tang,
• 435 receipt may be calculated at 259 baht per rai. Using the
427 same cost, again excluding rent, of 166 baht as in 1948, a
residual return to land may be estimated at 93 baht per rai.

Capitalized value of land may be calculated from
the formula $v = \frac{a}{r}$ where 'v' stands for capitalized value
of land, 'a' for income from the land, 'r' for the rate
of interest prevailing in the locality.¹⁶

When the calculated residual return to land is used,
the capitalized value of farm land in Bangchan (Zones 2-7)
is found to be 573 baht per rai in 1948, and 620 baht per
rai in 1953. When income deriving from explicit rent is used
in the calculation, however, the capitalized values become
327 baht per rai in 1948 and 487 baht per rai in 1953.

178 It is interesting to note that capitalized values of
423 land computed from these two different types of income were
434 closer to each other in 1953 (487 baht computed from income
427 deriving from explicit rent as against 620 baht computed
435 from the calculated residual return to land) than in 1948
(327 baht computed from income deriving from explicit rent
as against 573 baht computed from the calculated residual
return to land). In other words, landlords are now receiving
a larger proportion of the residual after payment of all

[426] 16. The rate of interest of 15 per cent per year is used.
This is the minimum going rate with security. Without
security, the rate may be as high as 30 to 50 per cent
per year.

177 factors, except land, at the going rate of return. A
423 more interesting point to note is that the capitalized
434 value of land in 1948 (327-573 baht per rai) was substan-
427 tially higher by either method of calculation than the
435 average price of farm land in that same year (240 baht per
rai), while the capitalized value of land in 1953 by either
method of calculation (467-620 baht per rai) was far below
the average price of farm land in that same year (1,583
baht per rai).

The situation in 1953 indicates that the price of
farm land in Bangchan has been bid up too high. The
stickiness of rent rates in the locality mentioned earlier
together with the fact that landlords are now receiving a
larger proportion of the residual after payment of all fac-
tors, except land, at the going rate of return have led us
to the belief that the proportionate share of the landlords
will be increasing in the near future.

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be of any help in the understanding of the hired laborer situation in Bangchan.

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Let us now turn to the last group of farm laborers -- the piece-workers. These laborers receive their remunerations in the form of cash paid at the completion of each job contracted. Four types of farm work were observed to have involved the utilization of piece-workers -- uprooting of rice seedlings, transplanting, harvesting, and digging earth and mounding. Uprooting, the heaviest of all rice growing steps because seedlings must be pulled up in budle and smashed against the shank of the worker, was limited to adult male workers. Transplanting, on the other hand, was the lightest of all these steps involving the utilization of piece-workers and may be done by all kinds of workers including the young. Harvesting and digging and mounding are too heavy for the young but not for the adult female workers to participate, so they are usually performed by adult workers of both sexes.

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It was found in the cost of production study in 1948 that 104 farm operators in Bangchan spent a total of 4,434 baht on uprooting done by piece-workers, 7,951 baht on transplanting, and 13,310 baht on harvesting, or an average per farm of 43 baht for uprooting, 76 baht for transplanting, and 128 baht for harvesting. Although digging and mounding is generally considered a part of farm work since it is done primarily in order to keep the buffalo shed above the water level as well as to improve the home garden; it is not

592 a transient member of the family. This was rather unusual,
464 however. The pattern was that a transient member was
[561] accepted when he is rather young. If he was quite mature,
he might also be accepted; but the expressed motive of the
592 accepting family would then be somewhat different. When
465 approached by a mature prospective transient member, the
464 family head would most probably say that he could not afford
to keep a hired laborer but he would be glad to let the man
or woman stay with him as a member of the family, and that
they might as well "share in the food, and share in the work".

It has been observed that transient family workers
received much less from the family than the standard wage
• [435] of hired laborers. While the latter received an annual wage
of 1,000 baht or the crop from 5 rai, the former might be
given only 50 or 100 baht a year. To farm operators of
moderate or large rice farms, transient family workers were
certainly an economic advantage. It was quite natural that
these operators would try to keep them in the family as long
as possible. Among the several methods observed were the
following: (1) adoption; (2) promise to sponsor ordination
of the young male transient member; and (3) giving a certain
amount of lampai.

592 It was mentioned in the section on the family in
464 Chapter II that adoption as practiced in Bangchan did not
[597] involve legal registration of the adopted child, and that
[792] maltreatment of adopted children was not infrequent. To
sponsor an ordination was in fact not quite as expensive

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- A. Indispensable: Shovel, spade, hoe, plow, harrow, roller, yoke, weeding knife, sickle, boat, pitchfork, rake, broom, wooden spatula, basket, mat bin, box bin.
- B. Dispensable, but essential for good crop production: Windmill, noria.
- C. Unnecessary, but contributing to convenience: Engine, winnowing machine, and others

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Price of various items of farm equipment varies from as low as 0.25 baht a piece for a broom to two thousand baht for a good boat. To avoid confusion, we shall use only the average of different prices for 1948 reported by our sample farm operators for the same item of equipment in order to eliminate variations due to quality. We may arbitrarily categorize farm equipment into low-price and high-price equipment, considering items costing under 100 baht as low-price equipment and items costing 100 baht or over as high-price equipment. On this basis, various farm equipment used by the 104 farm operators in 1948 are listed below.

<u>Items</u>	<u>Average prices (1948)</u>
A. Low-price	
Coconut broom	0.25 baht
Pitchfork	1.50 "
Shovel	3.16 "
Rake	4.75 "
Chinese broom	12.00 "
Yoke	12.06 "
Hoe	13.50 "
Basket	15.00 "
Weeding knife	19.00 "
Sickle	24.00 "
Harrow	30.00 "
Box bin	43.00 "
Mat bin	51.50 "
Plow	80.00 "

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B. High-price	
Noria	309.00 baht
Sampan boat	386.00 "
Windmill	429.00 "
Winnowing machine	498.00 "
Mard boat	1,046.00 "
Chala boat	1,400.00 "

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Prices of equipment used in rice farming give us only an idea of the initial investment necessary to start a rice farm and the cost of investment in this equipment, which may be calculated in terms of interest on that investment. Prices alone, however, do not determine the annual cost incurred in the use of farm equipment; for some items remain in service for several years while others have a relatively short life, and they all differ in the relative cost of repair and maintenance.

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In the 1948-49 survey of 104 farms, two types of schedules were used. The "early schedule" was administered to the first fifty respondents, and the "late schedule" was administered to the rest. The early schedule was more detailed than the late schedule. For example, in the early schedule there are detailed questions on the original cost and subsequent depreciation of each plow, and each detachable plow-part, owned by each of the fifty respondents in the early sample. On the basis of these responses, we calculated the average depreciation rate of plows. Each of the fifty-four respondents to the late schedule was asked only one question on plows, viz the number of plows he owned. In the case of each plow of each respondent to the late schedule, we simply applied the average cost and depreciation figures resulting from the early

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243 schedule. Thus, in our late sample much laborious detail was
• 435 obviated.

On the basis of responses from fifty farm operators,
annual depreciation for each item of farm equipment used in
1948-49 was calculated below:

<u>Items</u>	<u>Depreciation baht/year</u>
1. Coconut broom	0.25
2. Pitchfork	0.33
3. Yoke	1.17
4. Weeding knife	1.67
5. Hoe	2.51
6. Shovel	2.79
7. Basket	3.00
8. Rake	3.39
9. Harrow	3.42
10. Mat bin	3.85
11. Sickle	8.90
12. Box bin	10.32
13. Chinese broom	12.00
14. Plow	16.88
15. Winnowing machine	42.69
16. Noria	57.95
17. Sampan boat	65.83
18. Ward boat	84.81
19. Windmill	85.00
20. Chala boat	86.10

Several methods of computing depreciation were adopted.
In most cases, where the equipment was valueless at the end
of its servicable life, the annual depreciation was calcu-
lated by simply dividing the original cost of each item by its
expected length of service in years. In cases where the equip-
ment consisted of detachable parts, e.g., plows and windmills,
the cost of replacement of each part was first determined and
then reduced into annual replacement cost, then the annual
replacement costs of all parts were added together to make the

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*243 annual depreciation of the equipment in question. In cases
• 435 where the equipment still had some market values at the end
of their servicable lives, these residual values were first
deducted from the original costs before they were divided by
the length of service. The most complicated cases were those
of chala and mard boats and the noria, which involved annual
maintenance and minor repair as well as periodical major re-
pair in say every four or five years before they were finally
and totally worn out at the end of their rather long services
of from twenty to fifty years. In each of these cases, all
items of such expenses -- annual maintenance and minor repairs
as well as periodical major repairs -- were added to the orig-
inal cost and the total was divided by the entire length of
service in order to arrive at the annual depreciation figure.

*243

178 With few exceptions, all farm equipment enumerated
above have been used by Thai farmers for centuries. Thus,
since the establishment of the village there has been no change
in the use of such basic agricultural tools as the plow, har-
row, hoe, weeding knife and sickle. Moreover, it may be said
also that there have been only slight modifications, if any at
all, in these equipment during the long course of their usage.
The plow, harrow, or sickle which is now being used in Bangchan
is perhaps of the same type and appearance as would have been
seen centuries ago.

*243

177 Standing in contrast to these basic agricultural tools,
178 the first known propeller windmill in Thailand, according to
178 testimonies by Bangehan informants, was invented by Nai Yong
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231 section on livestock, Chapter 2. The method of buffalo feed has also been mentioned in the section on land utilization, Chapter 3.

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231 Inasmuch as draft animals, or more specifically buffaloes, provide services in rice production, they may very well be considered a kind of farm equipment. They are used in all steps of breaking and leveling the soil and also in threshing. They are absolutely indispensable on rice farms.

231 An average purchased value of a work buffalo was 985
435 baht per head. According to the 1948 survey, buffaloes began their farm work at the age of 4-5 years and remained in service [237] for an average of 10½ years. When they are dead, their meat is consumed and the hide is dired and made into rope. Some farmers sold the buffalo carcass on the spot and received an average price of 250 baht in 1948. When the original cost of 985 baht was subtracted by the residual value of 250 baht and the result was divided by the length of service of 10½ years, the annual depreciation so obtained was found to be 70 baht. This method of computation for depreciation when adopted for buffaloes appears to be rather crude, for the maintenance cost was neglected and some buffaloes might be bought at the age over 5 years (at varying prices) in which case their length of service might be expected to be shorter than 10½ years. The general pattern, however, was that farmers bought buffaloes which were freshly brought in from the northeast at the age between 4 and 5 years.

*243 1. Land: This element represents 22 per cent of
433 the total cost of producing paddy (Table 38). Of this,
[427] 15 per cent is actual payment for explicit rent while 9
per cent is assessed value of implicit rent.

Among the cost items in Table 38, cash expenses include actual rent (13%), wages for pieceworkers (3%), wages for hired laborers (3%) and seeds and materials (6%), while imputed expenses include implicit rent (9%), value of family labor (31%), value of the operator's labor (13%), depreciation (10%) and interest on investment (11%). It is seen that cash expenses comprise only 25 per cent, while imputed expenses comprise as high as 75 per cent of the total cost.

In view of the high proportion of imputed expenses, the method adopted in the imputation will be explained here.

[427] 1. Rent: Going rate for 1948-49 of 6.2 tang (49
[435] baht) per rai was used.

[532] 2. Value of family labor: Labor requirement based on
[461] acreage was first calculated, using the standard factor of
13.4 adjusted rai to one fully employed worker (this was the
1949 average for farms with regularly hired laborers on which
[435] workers were assumed to be fully employed). When the labor
requirement in terms of number of fully employed laborers
needed was known, imputed family labor cost was calculated
at the going wage rate for the year of 1,600 baht (1,000
baht cash and 600 baht of food privilege).

3. Value of the operator's labor: In addition to

* 243 the value of family labor, the cost of managerial service of
433 the operator of 1,000 baht was arbitrarily charged for farms
- [435] with the size of 10 rai or over. For farms under 10 rai,
only 500 baht was arbitrarily charged as the cost of managerial
service.

4. Depreciation: From the original cost of each item of equipment (including buffaloes) was deducted its residual value at the termination of its service, and the result was divided by the expected length of service in years of the equipment.

5. Interest on investment: The rate of 15 per cent per year was arbitrarily chosen. This was the maximum legal rate, and was also a minimum rate of return which any person in Bangchan might reasonably expect from his money if he chose to lend it out at any moment.

* [128] Since much of these imputed expenses were arbitrarily chosen, the cost of producing paddy might naturally vary widely according to the assigned value of each item. Our cost of production figure, then, will be more meaningful, if the amounts of these arbitrarily imputed values are constantly kept in mind.

* 243 Farms in Bangchan are composed of from one to four
433 parcels of land. The characteristics of this fragmentation
461 are shown in Table 39. The size of a parcel ranges from one
423 rai to 65 rai, averaging 18.8 rai. Fragmentation obviously
brings about a waste of considerable time and energy spent
in going from one parcel to another, and thus an increase in

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Buffaloes are considered as a kind of farm equipment, so the cost of buffalo labor appears under the item of cost of equipment. Buffalo labor is, however, so closely associated with man labor that it seems to be more appropriate to discuss it here.

It has been pointed out that the accomplishment of farm work during the critical period depends largely on buffalo labor. Farmers fully realize the importance of this draft animal, which is always given good treatment. Even in the busiest season of field preparation, when farmers work from dawn to dusk seven days a week, the buffalo has a full holiday each week (on Wan Phra, the Buddhist holiday) and has a four-hour noon recess, usually from 10 a.m. to 2 p.m., on work days.

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3. Farm equipment and supplies: This element represents 26 per cent of the total cost of producing paddy. Our records show that in 1948 the total value of farm equipment and materials of the 104 sample-farms amounted to 559,626 baht, averaging 5,381 baht per farm, and ranging from 443 to 16,733 baht. The frequency distribution of the value per farm of farm equipment and materials is shown in Table 44.

*

[122]

Table 45 shows the frequency distribution of the value per rai of farm equipment and materials which ranges from 34 to 518 baht, averaging 159 baht. It is seen, in spite of this rather wide range, that three-fifths of the value per rai concentrate in the interval between 100 and 200 baht per rai.

TABLE 44

FREQUENCY DISTRIBUTION OF THE VALUE PER FARM OF
EQUIPMENT AND MATERIALS OF 104 FARMS
Bangchan, Thailand, 1948

*243 433 • 435	Class Intervals	Number of Farms	Average Per Farm
	baht		
	Under- 1,000	2	460
	1,000- 1,999	12	1,477
	2,000- 2,999	8	2,596
	3,000- 3,999	17	3,490
	4,000- 4,999	11	4,511
	5,000- 5,999	15	5,473
	6,000- 6,999	11	6,380
	7,000- 7,999	9	7,380
	8,000- 8,999	4	8,307
	9,000- 9,999	4	9,357
	10,000-10,999	6	10,520
	11,000-11,999	4	11,584
	12,000-and over	1	16,733
	Total	104	88,268
	Mean	5,381 baht	
	Median	5,055 baht	

TABLE 45

FREQUENCY DISTRIBUTION OF THE VALUE PER RAI
OF EQUIPMENT AND MATERIALS OF 104 FARMS
Bangchan, Thailand, 1948

Class Intervals	Number of Farms
<u>baht</u>	
Under- 50	1
50 - 99	11
100 --149	38
150 - 199	23
200 - 249	13
250 - 299	8
300 - 349	22
350 - 399	3
400 - 449	2
500 - 549	1
550 - 599	2
Total	104
Mean	.159 baht
Median	.152 baht

*243

434 were in the class interval of from -1 to -2,000 baht, 9
• [435] from -2,001 to -4,000 baht, and one -- the least efficient
as far as this measurement is concerned -- produced as low
a labor income as -8,006 baht. This last farm had to sup-
port a large family of eleven members. With an acreage of
40 rai, which was rather small relative to the size of the
family (another family of ten was operating a 110-rai farm
in that same year), it was natural that this farm did not
have much rice to sell.

*243

434 In figuring farm expenses, we intentionally left
342 out the dwelling and included as farm buildings only the
ones that housed the buffaloes, farm equipment and materials.

[427]
[435]

The main reason for this omission was that there was a wide
range of dwelling facilities in Bangchan -- from a teak
building valued at 30,000 baht to a dirt floor thatched
shack valued at no more than a few hundred baht. Besides,
rental for a dwelling in rural areas of the country is prac-
tically unknown. Since a family living in the village must
have their own dwelling regardless of their occupation, it
was considered in this study that dwellings should be sepa-
rated from farm investment. This consideration was further
substantiated by the fact that when a family gives up farming
they continue to live in the dwelling while all the farm
equipment may be sold.

*243

434 When the charge for dwelling is dispensed with for
433 the reasons given above, the only difference between labor

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426 representation of internal savings in the community, they

454 probably overstate this increase somewhat.

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When calculated in the manner outlined above, the

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net accumulation of assets of our 96 sample-families was found to total 84,942 both during the period from March, 1948 to February, 1953, averaging 885 baht per family per year. The frequency distribution of this accumulation of assets is shown in Table 59.

It is seen that of 96 sample-families, 90 had positive accumulation while only 6 had negative accumulation. Fifty-six or more than half of the total number of families studied had an accumulation of assets in the class interval between 0 and 999 baht. The highest amount of accumulation was found to be 9,000 baht, while the lowest was -10,470 baht.

We should examine the figures of Table 59 more closely before drawing a sweeping conclusion from the mere fact that 90 out of 96 sample-families had positive accumulation. In the first place, the raw data show that of the 56 families reporting accumulation in the class interval of 0 - 999 baht, there were 42 families whose accumulation was 0. Thus the number of families with positive accumulation was really not 90, but actually 48 or only half of the total sample-

• [435]

families. Besides, consideration must be paid to the fact that gold is not only a kind of security but also an article of prestige as well, and a gold necklace of 15 - 30 gram weight valued at 500 - 1,000 baht is usually worn by a rural Thai who can afford one. When a person reappears in the

²⁴³ the export price was expressed in foreign exchange. The
⁴³⁹
⁶⁵⁵ Rice Office figured its accounts at the official rate of
exchange, and the price in foreign currency was fixed at
such a level that even when converted at the official rate
the Rice Office could buy rice from millers and still make
a 20 per cent profit on the transaction. The foreign
exchange proceeds were turned over to the Bank of Thailand.
The bank in turn might sell part of the foreign exchange
at the official rate, e.g., for certain imports, but it
also sold part at the open-market rate of exchange. On
this portion it made an additional profit equal to the
difference between the two rates. Ingram estimates that
for each metric ton of white rice, 15 per cent broken, for
which the gross price to miller was 1,306 baht in 1951,
the total government profit was 1,304 baht, of which 248
baht was trading profit and 1,056 baht was exchange profit.⁴
Another writer estimates that the government's profit from
each metric ton of white rice, 5 per cent broken, was 1,650
baht.⁵

²⁴³ In 1951, the Ministry of Commerce began to issue a
• ⁴³⁵ number of permits to export rice against commercial con-
⁴³⁷ tracts. Since the world price of rice was still above the
⁶⁵⁵ prices fixed in government contracts, exporters were eager
⁶⁶¹ to obtain the private permits, and a lively market for

4. Ibid., pp. 89-90.

5. M. R. Anuporn, "Rice and the Thai Government," Prachatiatt
February 5, 1955.

*243 permits sprang up. During 1951 the black-market price for
• 435 such permits reached U. S. \$35 per ton. Officials were
439 obtaining permits for export against commercial contract
655 and promptly selling them in the market. A permit for 10,000
661 tons meant \$30,000 even at the low price of \$3 per ton, and
when the price hit \$20-\$30, the temptation to bribe the
crucial officials was enormous. Millers were eager to
get a cut also, and they were reluctant to make rice avail-
able unless they got some kind of a premium.⁶

*243 By 1953, however, the world demand for marketable
439 rice began to decline, and it may be said that the rice
433 trade had shifted from sellers' market to buyers' market.

The primary reason for this decline was the recent increase
in production in the deficit countries. As a rice export-
ing country, Thailand was naturally adversely affected.
Her position was further aggravated by high production in
Burma which offered lower prices in the international market.

*243 In recent years, the export prices of Thai rice had
435 been steadily raised. For a ton of white rice, 5 per cent
439 broken, it was L47 5s in 1951, L50 5s in 1952, and L55 5s
655 in 1953. The decline of demand forced the government to
lower the export prices by L1 - L5 per ton for the first
time in 1954, and finally to virtually abolish its monopoly
over the export of rice in 1955.

Thus, rice export has now become "free", but actually
under rigid rules and regulations especially with reference

6. Ingram, op. cit., p. 91.

243 to the control of foreign exchange. By abolishing its
439 monopoly over rice export the government simply gives up
655 its trading profit but still retains the huge exchange
• 435 profit.

It is seen that the government had been strengthening its finances and increasing its revenues through the operations of rice monopoly and exchange control, and at the same time the internal prices of rice were kept at a low level. The largest share of the burden has no doubt fallen on the rice farmer, who receives less than one-half of the paddy price he would have received in a really free market. The lively market for export permits and frequent reported incidents of irregularities by crucial officials mean that the difference between the price that the farmer should receive and the price he actually receives has not all gone to the government revenue. This difference, amounting to no less than a billion baht annually, cannot therefore be expected to be channelized back to the farm. The worst part of the system, however, is that in practice there has been a kind of an upper limit without any corresponding lower limit for farm prices of paddy. Thus, while export prices steadily rose, the farm price of paddy in Bangchan was maintained at 900-1,000 baht per ton during the period from 1950 to 1952. When the export price began to decline in 1953, but in fact it was still well over the 1951 level, the Bangchan paddy price dropped abruptly to 600 baht.

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Before War II, the problem in rice marketing had been one of alleged usurpation by the Chinese middlemen -- the rice dealers and the millers. Expert organizational ability, it has been observed, has put the Chinese in control over the internal rice trade of the country. Even now, all the five rice dealers operating in Bangchan are Chinese, and the three largest rice mills in the market town of Minburi are owned and operated by the Chinese. The other rice mill -- the smallest of the four in operation in Minburi -- is owned by a Moslem.

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Ingram observes that the postwar system has had the effect of increasing the number of Thai middlemen and exporters. The fixed buying price of the Rice Office introduced a degree of stability into the paddy market and enabled Thai middlemen to compete with the Chinese. Formerly, the price of paddy fluctuated wildly from place to place and from month to month because of the variety of measures used in buying it, because of seasonal variations, and because of the many transactions involving merchandise or loans. Thai middlemen did not have the working capital, the experience, or the trading ability to compete with the Chinese under those conditions. But when the millers' buying prices became fixed within narrow limits for long periods, the middleman function was greatly simplified. No doubt other factors were involved, but people in the rice trade consider the greater stability of prices to be of major importance in the rise of Thai middlemen.⁷

7. Ibid., p. 92.